

HEPATITIS C

Epidemiology

Source: Humans

Anatomical source

Blood, sometimes other body fluids

Transmission

- Parenteral exposure (contaminated needles, razors)
- Perinatally
- Sexually (rare)

Incubation
6-7 weeks
(2 wk- 6 months)

Clinical case definition

Majority asymptomatic
Discrete onset of symptoms: malaise, weakness, anorexia, liver abnormalities, jaundice
Elevated serum aminotransferase levels

Complication: cirrhosis of the liver, hepato-cellular carcinoma, fulminant hepatitis

Death: 5% mortality rate

Communicability: HCV RNA in blood
1-3 weeks before onset; may persist indefinitely in 85%

Exclusion not necessary

1.6% prevalence in the U.S.

Diagnosis

Hepatitis C Virus – small, single stranded RNA; member of the flavivirus family with multiple genotypes and subtypes.

Lab Diagnosis

- **Serologic Assays:** measure antibodies to HCV. Does not distinguish between acute, chronic, and resolved infection.
- **Recombinant ImmunoBlot Assays (RIBA):** same antigens as enzyme immunoassay but more specific- prevents false positives.
- **Nucleic Acid Detection:** Detects HCV RNA using gene amplification techniques (RT-PCR). Can be detected in serum or plasma 1-2 weeks after exposure to the virus, weeks before onset of alanine aminotransferase elevations or appearance of anti-HCV.

Acute:

Probable: clinically compatible, antiHCV positive, has not been verified by other tests.

Confirmed: Clinically compatible, IgM antiHAV negative, IgM antiHBc or HBsAg negative, antiHCV positive or RT-PCR showing viral presence

Hepatitis C past or present

infection:

Probable: AntiHCV EIA positive with ALT above normal

Confirmed: EIA positive with signal to cut off ratio ≥ 3.8 , RIBA, quantitative RT-PCR, any nucleic acid positive test

Treatment, Prophylaxis

Treatment

- Inhibiting HCV replication & eradicating infection
- Pegylated interferon in combination with ribavirin is most effective treatment
- Gets rid of virus in 40% of genotype 1 and 80% genotypes 2 and 3
- All Hepatitis C patients should be immunized against Hepatitis A and B
- Patients should avoid certain medications and alcohol

Prophylaxis

- No vaccine available
- Immunoprophylaxis not recommended for exposed persons

Standard Precautions

Control

Precautions

- Avoid intravenous drug use
- Do not share razors or toothbrushes
- Practice safe sex
- Risks of piercing and tattoos
- Clean any blood spills with bleach while wearing protective gloves

People infected with Hepatitis C should not donate blood, organs, or tissue

Report all cases